Not too hot, not too cold: Behavioral thermoregulation of adult sockeye salmon in Lake Washington

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Adult sockeye salmon (*Oncorhynchus nerka*) return to Lake Washington several months prior to spawning, spending the warmest months of the year in the lake. Unlike in the ocean, once sockeye return to Lake Washington, they are not avoiding predators or seeking prey. Therefore, the temperature preferences of the adult sockeye in Lake Washington can be attributed to physiological factors including energy conservation and final maturation. In the summer of 2003, 257 sockeye were tagged at the Ballard locks with temperature loggers. 37 tags with readable data were recovered from fish on the Cedar River. 93.4% of temperature detections were in the 9-118 C temperature range while only 23.6% of the water column is in that range during August and September, months sockeye spend in the lake. While cooler water was available to the sockeye during their lake residence, the fish rarely inhabited it despite there being sufficient oxygen. Likewise, the fish avoided warmer waters closer to the surface. We propose that the fish selected a temperature range ideal for final sexual maturation prior to swimming upstream to spawn.